IN THE CLAIMS:

1. (currently amended) A method for the determination of triglyceride individual molecular species composition of matter in a biological sample comprising:

subjecting the biological sample to lipid extraction to obtain a lipid ~~extract and~~ extract;

subjecting the lipid extract to two dimensional electrospray ionization tandem mass spectrometry ~~(ESI/MS/MS) producing the determination.~~ (ESI/MS/MS);

determining a sensitivity of the molecular species; and

applying a correction factor to the sensitivity to produce the determination, wherein the correction factor is determined using a least-square regressive non-linear curve fitting.

2. (original) A method in accordance with Claim 1 wherein the lipid extraction is a chloroform lipid extraction.

3. (currently amended) A method in accordance with Claim 2 wherein said ~~extraction is of a blood, serum, tissue biopsy, feces and urine sample~~ biological sample includes at least one blood, serum, a tissue biopsy, feces, and urine.

4. (currently amended) A method in accordance with Claim 3 wherein said ~~TG~~ biological sample is one of a mammalian tissue and a plant tissue.

5. (original) A method in accordance with Claim 4 wherein the mammalian tissue is human tissue.

6. (original) A method in accordance with Claim 5 wherein the determination comprises a finger print profile of a patient's triglyceride molecular species.

7. (currently amended) A method in accordance with Claim 6 wherein said finger print profile comprises the individual molecular species of a triglyceride composition of matter.

8. (currently amended) A method for the determination of triglyceride individual molecular species composition of matter directly from a lipid extract of a biological sample comprising:

subjecting said lipid extract to electrospray ionization tandem mass spectrometry. spectrometry (ESI/MS/MS);

determining a sensitivity of the molecular species; and

applying a correction factor to the sensitivity to produce the determination, wherein the correction factor is determined using a least-square regressive non-linear curve fitting.

9. (currently amended) A method in accordance with Claim 1 Claim 8 wherein said lipid extraction is chloroform extraction.

10. (currently amended) A method in accordance with Claim 9 Claim 8 wherein said TG biological sample is one of a mammalian or a plant tissue.

11. (original) A method in accordance with Claim 10 wherein said mammalian tissue is human tissue.

12. (currently amended) A method in accordance with Claim 6 Claim 11 wherein the biological sample is an aqueous human fluid sample subjected to centrifugation and/or conventional column chromatography suitable for separation of lipoproteins to resolve TG triglyceride into different lipoproteins.

13. (currently amended) A method in accordance with Claim 6 Claim 11 wherein the aqueous human fluid sample is selected from the group consisting of whole blood, blood serum, blood plasma, liver and urine.

14. (original) A method in accordance with Claim 13 wherein the lipid extract is obtained by extraction of said biological sample with chloroform.

15. (original) A method in accordance with Claim 14 wherein the triglyceride molecular species of the biological sample are determined by comparison with the triglyceride molecular species of a standard control sample.

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16. (original) A method in accordance with Claim 15 wherein the triacylglyceride molecular species of the biological sample are determined by comparisons of their ion peak intensities with the ion peak intensities of a standard control sample and iteratively deconvoluted and optionally normalized.

17. (original) A method in accordance with Claim 16 wherein said determination includes deconvolution of the intensity two dimensional intercept contours of the triglycerides at their neutral loss products.

18. (currently amended) A diagnostic kit for the determination of triglyceride molecular species in a biological sample comprising components suitable for carrying out ~~any of the method of Claim 1.~~ a method including:

subjecting the biological sample to lipid extraction to obtain a lipid extract;

subjecting the lipid extract to two dimensional electrospray ionization tandem mass spectrometry (ESI/MS/MS);

determining a sensitivity of the molecular species; and

applying a correction factor to the sensitivity to produce the determination, wherein the correction factor is determined using a least-square regressive non-linear curve fitting.

19. (withdrawn) A method for assessing a risk to an individual based on TG molecular species as an independent factor in the development of at least one condition in that individual for a medical condition selected from coronary artery disease, stroke, atherosclerosis and obesity which comprises analyzing a biological sample taken of an individual for TG molecular species determination, administering a therapeutic amount of a drug to the individual (treated), analyzing a corresponding biological sample of the treated individual, comparing the TG molecular species determination after drug administration with the TG molecular species determination prior to the drug administration and determining the benefit of decreased risk due to the drug now afforded to that individual.

20. (withdrawn) A method in accordance with Claim 19 wherein the comparison of the TG molecular species determination of the biological samples is indicative of development of the condition for that individual.

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21. (withdrawn) A method for identifying an agent which selectively targets specific triacylglyceride molecular species (e.g., saturated triacylglycerides) which comprises analyzing a biological sample of at least one treated individual for TG molecular species determination, administering a drug to the individual, analyzing a biological sample from said treated to individual, comparing the TG molecular species determination after said administration with the TG molecular species determination prior to drug administration and determining an effect on the treated individual of the drug administration.

22. (withdrawn) A method in accordance with Claim 21 wherein said comparison of the TG molecular species determination of the biological samples is indicative of development of the condition for that individual.

23. (withdrawn) A method of identifying a candidate lipid modulating drug having lipid modulating drug efficacy which comprises analyzing a biological sample of at least one individual subject for TG molecular species determination, administering a therapeutic amount of a candidate lipid modulating drug to the individual subject, analyzing a biological sample of said administered individual, comparing the TG molecular species determination after said administration with the TG molecular species determination prior to the drug administration and determining an effect if any on the individual of the drug administration.

24. (withdrawn) A method in accordance with Claim 23 wherein said comparison of TG analysis is indicative of a lipid modulating capacity of an administered drug.

25. (withdrawn) A method in accordance with Claim 24 wherein said modulating comprises lowering.

26. (withdrawn) A method for diagnosing and determining the response of a patient to tailored drug therapy which comprises analyzing a biological sample of a patient to be treated or TG molecular species determination, administering amount of a drug to the patient, analyzing a biological sample taken from the treated patient, comparing the TG molecular species determination after the administration with the TG molecular species determination prior to the drug administration and determining an effect on the treated patient of the drug administration.

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27. (withdrawn) A method in accordance with Claim 26 wherein said comparison of TG analysis is indicative of a successful tailored drug therapy.

28. (withdrawn) A method of screening candidate chemicals for lipid modulating efficacy in a subject which comprises analyzing a biological sample of a subject for TG molecular species determination, administering a therapeutic amount of a drug to that biological subject, analyzing a biological sample of said subject, comparing the TG molecular species determination after said administration with the TG molecular species determination prior to the drug administration and determining an effect if any on the subject of the drug administration.

29. (withdrawn) A method of screening in accordance with Claim 28 wherein said comparison of TG analysis is indicative of a candidate chemical having a lipid lowering potential on a human subject.

30. (withdrawn) A method of treating a subject comprising analyzing a biological sample taken of that subject for TG molecular species determination by the method by ESI/MS/MS.

31. (withdrawn) A medical treatment in accordance with Claim 30 wherein the subject is a human.

32. (withdrawn) A medical treatment in accordance with Claim 31 wherein said treatment is medicinal and therapeutic.

33. (withdrawn) A medical treatment comprising analyzing a biological sample taken of a subject for TG molecular analysis determination by ESI/MS/MS and prescribing a therapy based on the determination.

34. (withdrawn) A medical treatment in accordance with Claim 33 wherein the subject is a human.

35. (withdrawn) A method in accordance with Claim 34 wherein said medical treatment is therapeutic.

36. (withdrawn) A method of customizing drug therapy for a subject which comprises analyzing a biological sample taken of the subject for TG molecular species

determination by ESI/MS/MS and customizing the subject's drug therapy based on the results of the TG molecular species determination.

37. (withdrawn) A method of customizing drug therapy in accordance with Claim 34 wherein the subject is human.

38. (withdrawn) A method of retarding, preventing, ameliorating or diagnosing disease in a subject based on TG molecular species determination of a biologic sample of the subject, which comprises analyzing a biological sample taken of a subject for TG molecular analysis by ESI/MS/MS determination associated with the disease and prescribing a therapy for the subject based on the TG molecular species determination.

39. (withdrawn) A method in accordance with Claim 38 wherein the subject is human.

40. (withdrawn) A method of managing a library of chemicals which comprises administering a chemical selected from the library to a subject and analyzing a biological sample taken of that subject for TG molecular species determination by ESI/MS/MS and assigning a priority to said chemical for further development based on that determination.

41. (withdrawn) A method in accordance with Claim 40 wherein the subject is human.

42. (withdrawn) A method of determining a subject's response to administration of a drug which comprises administering a drug to the subject, and analyzing a biological sample taken of a subject for TG molecular analysis by ESI/MS/MS following said administration.

43. (withdrawn) A method in accordance with Claim 42 wherein the subject is human.

44. (withdrawn) A method of providing a medical assessment to a subject which comprises analyzing a biological sample taken of a subject for TG molecular analysis by ESI/MS/MS and providing an assessment to the subject based on that determination.

45. (withdrawn) A method of providing a medical assessment in accordance with Claim 44 wherein the subject is human.

46. (withdrawn) A method of enhancing medical care provided to a subject which comprises analyzing a biological sample taken of a subject for TG molecular analysis by ESI/MS/MS and providing a modulated therapy to the subject.

47. (withdrawn) A method of enhancing subject care in accordance with Claim 46 wherein the subject is human.

48. (withdrawn) A method in accordance with Claim 47 wherein the TG molecular analysis is a TG molecular analysis.